installation guide

hp StorageWorks business copy eva/ma/ema host agent v2.1a for Sun Solaris

Product Version: v2.1a

Third Edition (May 2003)

Part Number: T3032–96006

The HP StorageWorks "Business Copy (BC) for enterprise virtual array (EVA), modular array (MA), and enterprise modular array (EMA)" is the new name for the "Enterprise Volume Manager (EVM)" software.

This guide describes procedures for installing and removing the BC host agent software.

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Business Copy EVA/MA/EMA Host Agent v2.1a for Sun Solaris Installation Guide
Third Edition (May 2003)
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about this guide

This installation guide provides information to help you:

- Understand Business Copy (BC) host agent installation prerequisites
- Install BC Host Agent v2.1a for Sun Solaris software on a host computer in a BC v2.1a network.
- Reinstall BC host agent software on a host computer
- Remove BC host agent software from a host computer
- Contact technical support for additional assistance

“About this Guide” topics include:

- Overview, page 6
- Conventions, page 8
- Getting Help, page 10

Overview

This section covers the following topics:

- Intended Audience
- Prerequisites
- Related Documentation

Intended Audience

This guide is intended for customers and HP authorized service providers. In addition to being familiar with BC (previously called EVM), readers should also be knowledgeable of BC-supported:

- SAN fabric configurations
- Host operating-system environments
- Storage systems
- Multibus configurations

Prerequisites

Before installing BC Host Agent v2.1a software, make sure you consider the following items:

- Has the BC Server v2.1a software been installed on a storage management appliance (SMA)? Supported SMAs include:
  - — Compaq SANworks Management Appliance
  - — Compaq SANworks Management Appliance II

  If not, install the BC Server v2.1a software on the SMA (also known as the HP OpenView Storage Management Appliance) before continuing. Refer to the *HP StorageWorks Business Copy EVA/MA/EMA Server v2.1a Installation Guide* (T3032–96002).
- Does the host computer on which the BC Host Agent v2.1a software is being installed have visibility to an SMA in the same SAN environment? If not, refer to the *HP StorageWorks Business Copy EVA/MA/EMA v2.1a Network Administration Guide*[1] (T3032–96001).

1. Hereafter referred to as BC Network Administration Guide.

Related Documentation

In addition to this guide, HP provides corresponding information:

- *HP StorageWorks Business Copy EVA/MA/EMA v2.1a Read Me First*[2] (T3032–99001)
- BC Network Administration Guide
- *HP StorageWorks Business Copy EVA/MA/EMA Host Agent v2.1a for Sun Solaris Release Notes*[3] (T3032–98005)
- BC online Help & User Guide as part of the BC server software and on the BC documentation CD-ROM

2. Hereafter referred to as BC Read Me First.
3. Hereafter referred to as BC Host Agent Release Notes.

Conventions

Conventions consist of the following:

- Document Conventions
- Text Symbols

Document Conventions

The document conventions included in Table 1 apply in most cases.

Table 1: Document Conventions

Element	Convention
Cross-reference links	Blue text: Figure 1
Key and field names, menu items, buttons, and dialog box titles	**Bold**
File names, application names, and text emphasis	*Italics*
User input, command and directory names, and system responses (output and messages)	`Monospace font` `COMMAND NAMES` are uppercase monospace font unless they are case sensitive
Variables	*`<monospace, italic font>`*
Website addresses	Blue, underlined sans serif font text: http://www.hp.com

Text Symbols

The following symbols may be found in the text of this guide. They have the following meanings:

WARNING: Text set off in this manner indicates that failure to follow directions in the warning could result in bodily harm or death.

Caution: Text set off in this manner indicates that failure to follow directions could result in damage to equipment or data.

Note: Text set off in this manner presents commentary, sidelights, or interesting points of information.

Getting Help

If you still have a question after reading this guide, contact an HP authorized service provider or access our website: http://www.hp.com.

HP Technical Support

Telephone numbers for worldwide technical support are listed on the following HP website: http://www.hp.com/support/. From this website, select the country of origin.

Note: For continuous quality improvement, calls may be recorded or monitored.

Be sure to have the following information available before calling:

- Technical support registration number (if applicable)
- Product serial numbers
- Product model names and numbers
- Applicable error messages
- Operating-system type and revision level
- Detailed, specific questions

HP Storage Website

The HP website has the latest information on this product, as well as the latest drivers. Access storage at http://www.hp.com/country/us/eng/prodserv/storage.html. From this website, select the appropriate product or solution.

HP Authorized Reseller

For the name of your nearest HP authorized reseller:

- In the United States, call 1-800-345-1518
- In Canada, call 1-800-263-5868
- Elsewhere, see the HP website for locations and telephone numbers: http://www.hp.com.

Installation Preparation

Installing BC host agent software involves the following major steps:

1. Reading the BC Network Administration Guide for configuration requirements and planning.
2. Coordinating Business Copy Installation Activities, page 12
3. Removing EVM V1.x Software, page 13
4. Verifying the Business Copy Server Configuration, page 14
5. Verifying the Host Configuration, page 15
6. Preparing for Installation, page 18
7. Starting the Installation, page 19
8. Completing the Installation, page 27

Coordinating Business Copy Installation Activities

BC server and BC host agent software can be interdependent. Refer to the BC Read Me First for each product to verify the version requirements and compatibility.

Ensure that:

- BC host agent installation activities have been coordinated with users of the host.
- The BC host agent version being installed is compatible with the BC server for this BC network.
- The BC server that supports the BC host agent installation is installed before installing the BC host agent.
- The BC server is running while installing the BC host agent.

Note: HP recommends making sure that the BC server is running to allow the BC host agent installation software to establish communication with the BC server. If necessary, the BC host agent can be installed without the BC server running.

When ready, go to the next section.

Removing EVM V1.x Software

If EVM V1.x Server or Client software is currently installed on the host computer, HP recommends removing this software prior to installing the BC Host Agent v2.1a software. If necessary, refer to EVM V1.x documentation for removal procedures.

The BC Host Agent v2.1a software installation detects previous EVM V1.x Client installations, and removes the client after user authorization. However, this automatic removal process may not be as thorough as when removing the server and client using EVM V1.x documentation.

When ready, go to the next section.

Verifying the Business Copy Server Configuration

Before installing the BC host agent, verify that the BC server:

- Has a version level that supports this host agent
- Remains running during the host agent update

Also, record the following SMA information for the BC server installation:

- Fully qualified network name (such as MyAppliance.dept.corp)
- IP address (such as 11.22.333.4444)

Make sure to have this information available during the host agent installation.

To view the network name and IP address of an SMA, browse to the SMA and log in by verifying or establishing password control. Both items are shown at the top of the home page.

When ready, go to the next section.

Verifying the Host Configuration

Before installing the BC host agent, verify that the host has BC-supported configurations and versions of the following:

- Host operating-system version
- StorageWorks Solution Software kit
- FC HBAs and drivers
- StorageWorks Secure Path
- Multibus failover configuration with the storage controllers

This BC host agent is not cluster-aware and does not support clustering.

Refer to the BC Network Administration Guide and BC Host Agent Release Notes for specific requirements.

When ready, go to “Installing the Business Copy Host Agent” on page 17 to start the installation.

Installing the Business Copy Host Agent

2

This module assumes that "Installation Preparation" on page 11 has been read and all appropriate steps have been successfully completed. Complete the following topics in sequence to install a BC host agent:

1. Preparing for Installation, page 18
2. Starting the Installation, page 19
3. Completing the Installation, page 27

Preparing for Installation

Complete the following procedure to prepare for installing the BC host agent software:

1. Locate the BC host agent CD-ROM.
2. On the host computer, open a terminal window and log on as a super-user.
3. Insert the CD-ROM into the CD drive.
4. Navigate to the directory on the CD-ROM where the BC Sun Solaris files are located (`. . ./bc_solaris_ha_21a`).

When ready, go to the next section.

Starting the Installation

Complete the following procedure to install a BC host agent on a host.

Note: During the installation procedure, press **Enter** to choose the default response. To view more information, enter a question mark (?).

1. Enter `./install.sh` to start the installation script.

   The script starts the BC host agent installation and the information in Figure 1 displays.

```
Welcome to the HP StorageWorks Business Copy (BC), BC Host Agent v2.1a
installation script. This script will install BC on this computer.

CONVENTIONS:
Throughout this installation, messages which require input are
displayed (such as: Are you ready to continue? [ y|n ] [ ? ](default=
yes): or [y,n,?,q]). The "y|n" and "y,n" indicate that a yes or no
answer is required and the "default= yes" indicates that pressing the
Enter key will accept the yes answer. The "?" indicates that
installation help is available. Pressing the ? key and then the Enter
key displays a help message and repeats the original question. The "q"
indicates an opportunity to quit the installation.
.
.
.
IMPORTANT: Carefully read the License Agreement terms before
proceeding. The "more" command is used to display the License Terms.
Use <Enter> to move one line down, <spacebar> to page down, or <b> to
page up. Enter <q> to quit.

Press the Enter key to continue [ ? ]:
```

Figure 1: Script conventions and licensing prompt

2. Press **Enter** to continue.

3. Review the license agreement and answer the question in Figure 2.

   If necessary, see Figure 1 for clarification on how to scroll through the on-screen license agreement.

```
Business Copy EVA & MA/EMA License Agreement

Attention Notice

IMPORTANT: READ CAREFULLY BEFORE USING THIS PRODUCT.

USE OF THE SOFTWARE IS SUBJECT TO THE HEWLETT-PACKARD COMPANY ("HP")
SOFTWARE LICENSE TERMS SET FORTH BELOW. USE OF THE SOFTWARE INDICATES
YOUR ACCEPTANCE OF THESE LICENSE TERMS. IF YOU DO NOT ACCEPT THESE
LICENSE TERMS, YOU MUST NOT INSTALL THE SOFTWARE.
.
.
.
If you agree to the terms, enter "y" then <Enter> at the question
prompt.

If you do not agree to the terms, enter "n" then <Enter> at the
question prompt, which will also terminate this installation script.
If you do not agree to these terms, HP does not grant you a license and
you may not use the Software. You should contact the supplier from
which you obtained this Software for instructions on returning the
Software for a refund.

Do you agree to the terms? [ y|n ] [ ? ] (default= yes):
```

Figure 2: License agreement

4. Press **Enter** to agree to these terms and continue the installation; enter **n** to exit the installation script.
5. Carefully review the list of operational considerations and make sure each item has been addressed before continuing the BC host agent installation (see Figure 3).

Note: If any of the operational considerations has not been addressed, exit the installation, address the items, and then restart the installation.

```
BC v2.1a is not backward compatible with previous Enterprise Volume
Manager (EVM) versions. Install BC v2.1a on all BC host agent computers
in the BC network.
You should consider operational issues before starting to install a BC
network:
- BC users have been notified of the planned installation
- BC jobs are not scheduled to run until after this installation
- BC undo-jobs do not exist when this installation is started
- BC jobs are not running during this installation
- BC host agent daemons are not running during this installation
CAUTION: Failure to properly address operational issues prior to and
during this installation of a BC network can lead to reduced
operational capability and failure of BC jobs.
Consult the BC Network Administration Guide for more information.
Continue with this installation? [ y|n ] [ ? ] (default= yes):
```

Figure 3: Operational considerations

6. Press **Enter** to continue the installation; enter **n** to exit the installation script.

   The next phase of the installation asks for a directory location. BC uses a default installation directory unless a user-defined directory is specified (see Figure 4).

```
Continuing this installation...
The default directory for installing BC is /opt/CPQevm, however, you
can install BC in a different location.
Enter a new BC installation directory or press <Enter> to use the
default directory:  [ ? ](default= /opt/CPQevm):
```

Figure 4: Directory location option

7. Press **Enter** to use the default installation directory; type a new path and press **Enter** to install in a user-defined installation directory.

   A confirmation question displays, which is similar to Figure 5.

```
You have selected <installation_directory> as the BC installation
directory, is this correct? [ y|n ] [ ? ](default= yes):
```

Figure 5: Directory location confirmation

Note: For reinstallations, continue with step 8.

For initial installations:

- Step 8 through step 11 are omitted.
- Figure 10 displays.
- Continue the installation with step 12 on page 24.

8. Press **Enter** to continue the installation; enter **n** to exit the installation script.

   The next phase of the installation script checks for a previous BC or EVM installation on the host computer (including BC v2.1a) and whether the BC or EVM daemons are currently running. The installation script displays text similar to that shown in Figure 6.

```
New Business Copy home directory /opt/CPQevm
Continuing this installation...
BC <installed_version> is installed and the BC daemons must be stopped
to continue.
Two options exist:
- Allow this script to stop the BC daemons and reinstall BC v2.1a.
- Exit now, use /etc/rc2.d/K89entrprsvolmgr stop to halt the BC
  daemons, and then restart this script.
Allow this script to stop the BC daemons and reinstall BC? [ y|n ]
[ ? ] (default= yes):
```

Figure 6: Detecting a previous BC installation

9. Press **Enter** to allow the script to stop the BC or EVM daemons and continue the installation; enter **n** to exit the installation script.

   If Yes is chosen, text similar to that shown in Figure 8 displays.

```
Business Copy daemons stopped.
The following package is currently installed:
  CPQevm   HP StorageWorks Business Copy Host Agent
           (SPARC) 2.1a
Do you want to remove this package?
```

Figure 7: Removing the previous BC installation prompt

Note: If No is chosen in step 10 because of an old EVM version installation, proceed to the documentation that came with the old EVM version and remove this version from the host computer. Then restart the installation script to install BC. BC and EVM versions cannot coexist on the same host computer.

Caution: If Yes is chosen in step 10, critical files that support the BC or EVM version are automatically removed with user confirmation and this software version becomes nonfunctional. Choose No in step 10 to exit the installation and retain the files.

10. Enter **y** to allow the script to remove the previous BC or EVM installation (Figure 8 displays); enter **n** to exit the installation script.

```
## Removing installed package instance <CPQevm>
This package contains scripts which will be executed with super-user
permission during the process of removing this package.
Do you want to continue with the removal of this package? [y,n,?,q]
```

Figure 8: Confirmation to remove the BC host agent

11. Press **Enter** (or enter **y**) to automatically remove the previous BC installation (Figure 9 displays) and initiate the BC host agent installation process (Figure 10 displays); enter **n** to exit the installation script.

```
## Verifying package dependencies.
## Processing package information.
.
.
.
## Executing postremove script.
## Updating system information.
Removal of <CPQevm> was successful.
```

Figure 9: Removing the BC host agent

```
New Business Copy home directory is /opt/<installation_directory>
Continuing this installation...
Starting to install Business Copy...
Processing package instance <CPQevm> from
<.../bc_solaris_ha_21a/SolarisPkg/CPQevm211>

HP StorageWorks Business Copy Host Agent
(SPARC) 2.1a
The selected base directory </opt/<installation_directory>> must exist
before installation is attempted.
Do you want this directory created now? [y,n,?,q]
```

Figure 10: Installing BC in the default directory

12. Press **Enter** (or enter **y**) to allow the script to install BC in either the default or a designated directory (Figure 11 displays); enter **n** to exit the installation script.

```
Using </opt/<installation_directory>> as the package base directory.
## Processing package information.
## Processing system information.
Installing HP StorageWorks Business Copy Host Agent as <CPQevm>
## Executing preinstall script.
.
.
.
## Executing postinstall script.
Installation of <CPQevm> was successful.
sb.ini successfully upgraded. Your original sb.ini file has been
renamed to sb-ini.orig
Enter the Management Appliance fully qualified name or IP address:
[ ? ]:
```

Figure 11: Initiating the installation (default directory example)

13. Enter the fully qualified name or IP address of the SMA that supports this BC host agent.

Note: The appliance name is required to establish network communication between BC host agents and the BC server. A default SMA name is derived from the appliance serial number:

- On a first generation SMA model, use the letters *swma* and include the last 6 characters of the appliance serial number.

  If the SMA software was restored using the Quick Restore CD v2.0, then the default appliance name begins with *sma* and includes all 12 characters of the appliance serial number.
- On SMA II model, use the letters *sma* and include all 12 characters of the appliance serial number.

If the default appliance name was changed, identify the current appliance name as shown in the upper right-hand corner of the SMA software GUI.

For example:

- If the SMA name is "MyAppliance" and the domain is "dept.com," enter `MyAppliance.dept.com` for a fully qualified name.
- If the SMA IP address is "11.22.333.4444," enter `11.22.333.4444` for the IP address.

A check is performed to verify communication with the SMA name or IP address:

- If this check is successful, Figure 12 displays.

```
Successful ping to <name_or_IP>.
Is <name_or_IP> correct? [ y|n ] [ ? ] (default= yes):
```

Figure 12: Successful ping to SMA and connection confirmation

- If this check fails, the question repeats.

  Examples of failure messages include:

  ```
  The ping to MyAppliance failed.
  The ping to 11.22.333.4444 failed.
  ```

  After three failed inputs, the fourth input is automatically accepted. This acceptance method allows the setup to continue in the event that the LAN is down or the SMA is offline.

14. Press **Enter** to confirm the SMA name or IP address; enter **n** to return to step 13 and reenter an SMA name or IP address.

    When the SMA name or IP address is accepted, a prompt to start the BC daemons displays (see Figure 13).

```
Start the Business Copy daemons now? [ y|n ] [ ? ] (default= yes):
```

Figure 13: Starting the BC daemons prompt

Note: HP recommends allowing the installation script to automatically start the BC daemons. Choosing not to start the BC daemons now means that this host computer cannot communicate with the BC server following the installation until the BC daemons are started manually.

15. Press **Enter** to start the BC daemons (Figure 14 displays); enter **n** to manually start the BC daemons later.

```
Business Copy daemons started.
Installation complete.
Please consult the BC Host Agent Release Notes before running Business
Copy.
```

Figure 14: Confirmation of BC daemon status and BC installation completion

The BC host agent is now installed. Refer to the BC Host Agent Release Notes.

Note: If necessary, refer to the BC Network Administration Guide for the procedure to manually start or stop the BC daemons.

Completing the Installation

If the BC host agent was started during installation, HP recommends browsing to the BC network and verifying that the BC host agent has been recognized. Otherwise, perform the verification after manually starting the host agent.

Completing the host agent installation topics include:

- Reusing Customized OSVM.ini Settings Following a BC Host Agent v2.1a Installation, page 27
- Manually Starting and Stopping the Business Copy Host Agent, page 27
- Browsing to the Business Copy Network, page 28
- Verifying that the Business Copy Host Agent Is Recognized, page 28
- Modifying System Files During Installation and Removal, page 29

Reusing Customized *OSVM.ini* Settings Following a BC Host Agent v2.1a Installation

If the previous EVM V2.0x or BC network used customized settings in the *OSVM.ini* file, these customized attributes should be reapplied following the BC host agent installation.

Note: A previous *sb.ini* file is automatically updated for required changes BC v2.1a operations during the BC host agent installation.

During the BC host agent installation, the previous *OSVM.ini* file is saved as *OSVM.ini.bak* to allow access to the customized settings. If desired, reapply the customized settings by migrating them from the *OSVM.ini.bak* file to the new *OSVM.ini* file.

Manually Starting and Stopping the Business Copy Host Agent

Refer to the BC Network Administration Guide for the procedures to manually start or stop the daemons on a BC host agent.

Browsing to the Business Copy Network

To browse to the BC network, the browsing computer must have a BC-supported browser with a Java™ Runtime Environment (JRE) installed.If browsing from a Sun Solaris computer, *the minimum JRE must be preinstalled*. The recommended JRE (version 1.3.1_03) can be downloaded from the Sun Microsystems website (http://java.sun.com/products/archive/j2se/1.3.1_02/ jre/index.html) or from the server (`C:\Program Files\Compaq\ SANworks\Enterprise Volume Manager\html\ jreDownloads\ss_jre13103.exe`).

Refer to the BC Network Administration Guide and *HP StorageWorks Business Copy EVA/MA/EMA Server v2.1a Release Notes* (AA–RTB6C–TE) for details.

Verifying that the Business Copy Host Agent Is Recognized

To verify that a BC host agent is being recognized by the SMA, complete the following procedure:

1. Browse to the SMA and log in.

   Refer to the BC Network Administration Guide, if necessary.
2. Click **Tools**.
3. Click **business copy**.

   The BC GUI displays.
4. Click **Help**.
5. Click **About Business Copy**.

   Verify that the BC version number is 2.1a.
6. Click **Resources**.
7. Review the Resources page to verify that the host is included in the host resources display.

   A successful installation displays the BC host agent on this page.
8. Continue to the next host-specific BC host agent installation guide to add other BC host agents to this BC network.

Modifying System Files During Installation and Removal

During BC host agent installation, the following host system file is modified: /etc/*services*.

Sample entries added to the /etc/*services* file include:

```
switchboard  4991/tcp  #CPQevm switchboard application
bdctrcv      4995/udp  #CPQevm broadcast receiver
                        application
```

During the BC host agent removal process, this file is modified again to remove the BC entries added during the installation process.

Removing the Business Copy Host Agent

3

Removing BC host agent software involves the following major steps:

1. Coordinating Removal Activities, page 32
2. Starting the Removal, page 33
3. Completing the Removal, page 35

Coordinating Removal Activities

Removing a BC host agent requires coordination to make sure that the software is removed cleanly from the host.

Caution: Make sure that all personnel involved with using applicable storage systems that contain BC are informed of the impending BC removal. If not properly planned and coordinated, removing a BC host agent while the host agent is involved in a running BC job can result in reduced operational capabilities and loss of data.

Ensure that:

- No BC jobs are running or "undoing" during the removal that involves the host.
- No BC jobs are scheduled to run or "undo" during the removal that involves the host.
- Removal activities have been coordinated with BC users and other operations.

Be aware that:

- Stopping a BC host agent prevents the host computer from being recognized by the BC network.
- Stopping a BC host agent prevents any jobs involving that host from running successfully.

When ready, go to the next section.

Starting the Removal

To remove the BC host agent from a host computer, complete the following procedure.

Note: During the installation procedure, press **Enter** to choose the default response. To view more information, enter a question mark (?).

1. Open a terminal window and log on as a super-user.
2. Change the working directory to the one containing the BC host agent.

   For example, the default installation directory is `.../opt/CPQevm/bin`.
3. Enter `./delete.sh` to initiate the removal script (Figure 15 displays).

```
BC Host Agent v2.1a is installed and the BC daemons must be stopped to
continue.
Two options exist:
- Allow this script to stop the BC daemons and completely remove
  BC v2.1a.
- Exit now, use /etc/rc2.d/K89entrprsvolmgr stop to halt the BC
  daemons, and then restart this script.
Allow this script to stop the BC daemons and remove BC v2.1a? [ y|n ]
[ ? ] (default= yes):
```

Figure 15: Stopping the BC daemons and removing BC prompt

4. Press **Enter** to allow the script to stop the BC daemons and continue the removal script (Figure 16 displays); enter **n** to exit the removal script and manually stop the BC daemons.

```
Business Copy daemons stopped.
The following package is currently installed:
  CPQevm   HP StorageWorks Business Copy Host Agent
           (SPARC) 2.1a
Do you want to remove this package?
```

Figure 16: BC package removal confirmation prompt

5. Press **Enter** (or enter **y**) to confirm the BC package removal (Figure 17 displays); enter **n** to exit the removal script.

```
## Removing installed package instance <CPQevm>
This package contains scripts which will be executed with super-user
permission during the process of removing this package.
Do you want to continue with the removal of this package? [y,n,?,q]
```

Figure 17: Prompt to remove the BC host agent from a named host

6. Press **Enter** (or enter **y**) to remove BC (Figure 18 displays); enter **n** to exit the removal script.

   The command prompt returns when the BC host agent removal is complete.

```
## Verifying package dependencies.
## Processing package information.
## Executing preremove script.
.
.
.
## Executing postremove script.
## Updating system information.
Removal of <CPQevm> was successful.
Removal complete.
```

Figure 18: Removal status

The BC host agent is now removed from this host computer.

Completing the Removal

After the BC host agent is removed, the computer can no longer participate in BC jobs. Running any BC job that involves this computer causes the job to fail.

HP recommends planning for the disposition of each BC job that involves the computer. For example:

- Delete the job (if the job will not be valid again).
- Change the job (to eliminate reference to this host).
- Leave the job as is (if the job might be used again).

From a BC network perspective, a BC host agent removal is not complete until all impacted BC jobs are resolved.

Reinstalling the Business Copy Host Agent

4

Situations may arise where a change in the BC network requires a change to BC server information stored by the BC host agent. For example:

- The SMA is renamed or replaced.
- The SMA IP address changes.
- The BC server software is moved to a different SMA.
- A network name changes.
- A host computer is reassigned for use with a different SMA.

For these situations, reinstalling the BC host agent may be appropriate.

Caution: Make sure that all personnel involved with using applicable storage systems that contain BC are informed of the impending BC reinstallation. If not properly planned and coordinated, reinstalling a BC host agent while running BC job can result in reduced operational capabilities and loss of data.

Two reinstallation methods exist:

- One-step Reinstallation—with this method, reinstall the BC host agent using "Installing the Business Copy Host Agent" on page 17. When prompted, allow the installation script to remove the existing host agent and then install the BC host agent.
- Two-step Reinstallation—With this method, remove the BC host agent using "Removing the Business Copy Host Agent" on page 31. Then reinstall the BC host agent using the procedure in "Installing the Business Copy Host Agent" on page 17.

glossary

This glossary defines terms used in this guide or related to this product and is not a comprehensive glossary of computer terms.

Agent
In a client/server system, a program that performs information gathering or processing tasks on behalf of a client or server. Agents often communicate with other agents to perform a collective task on behalf of the user.

StorageWorks agents run on storage system host computers and can be accessed by StorageWorks clients to control and manage the storage system.

BC Network
A network that consists of BC-enabled computers that are connected to a common LAN and to a BC-compatible StorageWorks storage system.

BCV
Business Continuance Volume. A generic term for a storage unit that is created from a standard production unit. A BCV unit can subsequently be used in production tasks, such as backups, application migration, data mining, and testing. A key feature of a BCV unit is that the unit can be accessed while the production volume remains online for normal I/O. The term *BCV unit* does not imply the use of any specific technology.

Client
A computer or program that requests a service of another computer in a client/server system.

Daemon
Diagnostic and execution monitor. Pronounced “demon.” A program usually associated with a UNIX system that performs a utility (housekeeping or maintenance) function without being requested or even known of by the user.

Device Manager or Element Manager
A Web-based storage environment manager that enables users to configure and monitor StorageWorks controllers. A device manager or element manager resides on the SMA.

Host
In StorageWorks storage system environments, the controlling computer to which a storage system is attached.

Instance
The presence of a program or set of related programs in a computer or storage system. In a BC network, only one BC server instance is allowed (loaded on the SMA), but many BC host agent instances are allowed (one instance per host operating-system computer).

Job (BC job)
A file created by BC that represents a user request to perform a task or series of tasks. For example, the BC job named *stor1_backup_daily_sales* might:

1. Replicate a storage unit by the clone method to create BCV units.
2. Mount the BCV units on a server.
3. Start the tape backup of the BCV units.

BC jobs are created by using the Job Create page of the GUI. Jobs can be run from the GUI, the EVM Command Line, script files, or a scheduler.

Node
A generic term for an addressable unit, such as a computer or peripheral device attached to a network. In BC, a BC-enabled computer that is connected to the BC network.

OpenView
An HP line of software products that provides storage management solutions, data protection and recovery, automatic performance tuning, storage virtualization, and other features for multivendor storage environments.

SAN
Storage Area Network. A dedicated, high-speed subnetwork of storage devices that are available to servers on a LAN or WAN. As storage devices are added to the SAN, they become accessible to the servers in the larger network.

SANworks
A Compaq line of software products that provides storage management solutions, data protection and recovery, automatic performance tuning, storage virtualization, and other features for multivendor storage environments.

See also OpenView.

Server
A computer or program that provides a service to other computers in a client (host agent)/server system. Servers often run continuously, waiting for requests from clients.

SMA
See Storage Management Appliance and Storage Management Appliance Software.

Storage Management Appliance
A host-independent server product designed to connect directly to the SAN fabric. The SMA and SMA software provide a centralized point for managing and monitoring SAN elements, including HP switches and storage arrays.

See also Storage Management Appliance Software.

Storage Management Appliance Software
SMA software installed on SMA hardware that provides a GUI for accessing the monitored SAN environment. This software also provides a launch site for a variety of value-added applications and provides navigation links to directly manage storage components on the SAN.

Storage System
From the perspective of a host, each addressable StorageWorks controller (or controller pair) and their attached physical disks.

StorageWorks
An HP line of hardware storage solutions for multivendor server environments.

TCP/IP
Transmission Control Protocol/Internet Protocol. A suite of communications protocols used to connect host computers to the Internet.

Undo (BC Job)
A special job file that is automatically created by BC for "undoing" steps that have been completed in a user-created job. For example, the job named *undo_stor1_backup_daily_sales* could be run after a tape backup was completed. The undo could unmount the BCV units and return their disks to the pool of free storage resources.

Unit
In StorageWorks storage systems, a logical volume identifier that the controller uses when a container is mounted on a host computer. For example, the unit identifier *D1* could represent a RAID 0+1 striped mirror set that is mounted on a host computer. StorageWorks disk units begin with the letter "D" and tape units begin with the letter "T."

Volume
A generic term for a storage unit, such as a hard disk, floppy disk, disk cartridge, CD-ROM, or tape cartridge.

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